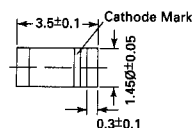


Silicon Exptaxial Planar Diode

fast switching diode in MiniMELF case especially suited for automatic surface mounting.

Identical electrically to standard JEDEC 1N4148



Glass case MiniMELF

These diodes are delivered taped.

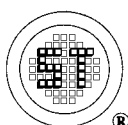
Details see "Taping".

Weight approx. 0.05g

Dimensions in mm

Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

	Symbol	Value	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25\text{ }^{\circ}\text{C}$ and $f \geq 50\text{ Hz}$	I_o	150 ¹⁾	mA
Surge Forward Current at $t < 1\text{ s}$ and $T_j = 25\text{ }^{\circ}\text{C}$	I_{FSM}	500	mA
Power Dissipation at $T_{amb} = 25\text{ }^{\circ}\text{C}$	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	175	$^{\circ}\text{C}$
Storage Temperature Range	T_s	-65 to + 175	$^{\circ}\text{C}$
¹⁾ Valid provided that electrodes are kept at ambient temperature			



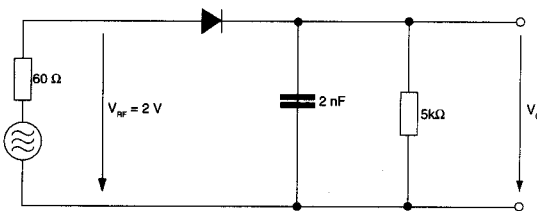
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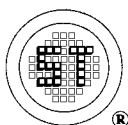


Characteristics at $T_J = 25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 10\text{ mA}$	V_F	-	-	1	V
Leakage Current at $V_R = 20\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 20\text{ V}$, $T_J = 150\text{ }^{\circ}\text{C}$	I_R I_R I_R	- - -	- - -	25 5 50	nA μA μA
Reverse Breakdown Voltage tested with $100\text{ }\mu\text{A}$ Pulses	$V_{(BR)R}$	100	-	-	V
Capacitance at $V_F = V_R = 0$	C_{tot}	-	-	4	pF
Voltage Rise when Switching ON tested with 50 mA Forward Pulses $t_p = 0.1\text{ s}$, Rise Time $< 30\text{ ns}$, $f_p = 5\text{ to }100\text{ kHz}$	V_{fr}	-	-	2.5	V
Reverse Recovery Time from $I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $V_R = 6\text{ V}$, $R_L = 100\text{ }\Omega$,	t_{rr}	-	-	4	ns
Thermal Resistance Junction to Ambient Air	R_{thA}	-	-	0.35 ¹⁾	K/mW
Rectification Efficiency at $f = 100\text{ MHz}$, $V_{RF} = 2\text{ V}$	η_V	0.45	-	-	-
¹⁾ Valid provided that electrodes are kept at ambient temperature					



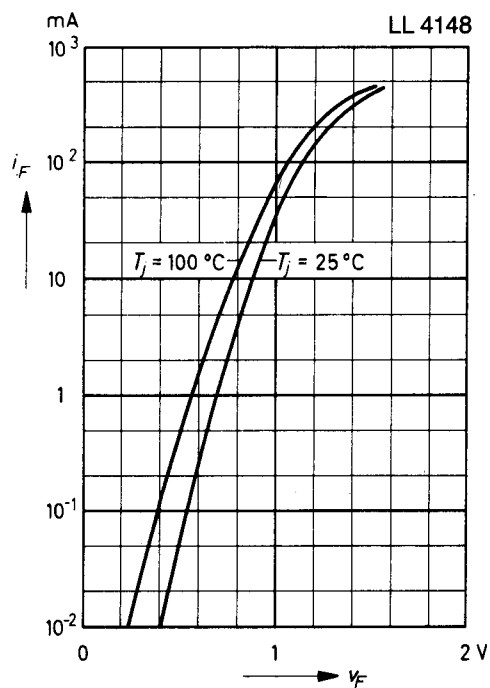
Rectification Efficiency Measurement Circuit



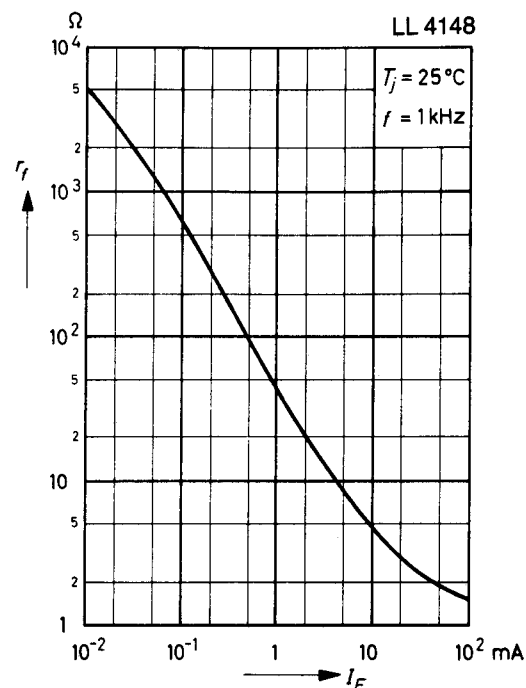
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Forward characteristics

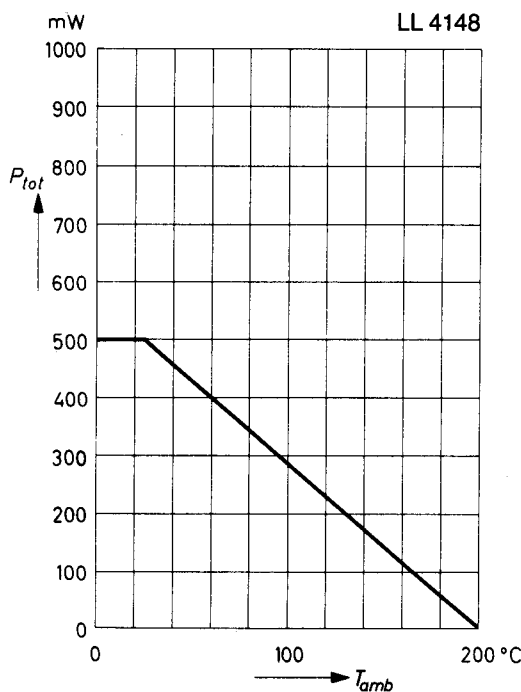


Dynamic forward resistance versus forward current

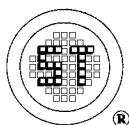
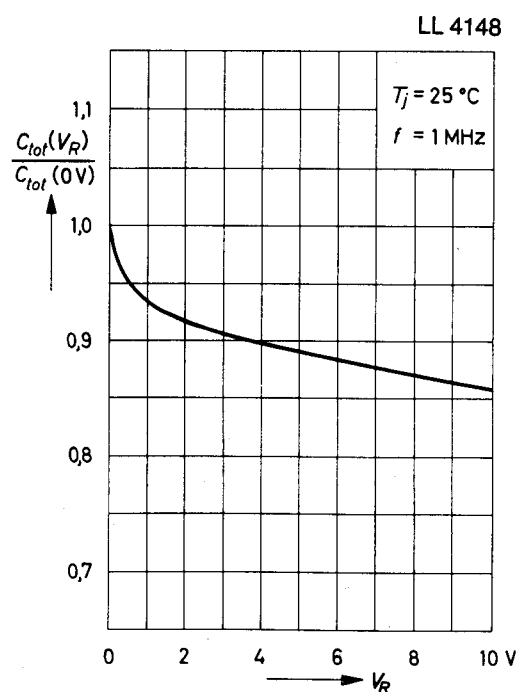


Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept at ambient temperature



Relative capacitance versus reverse voltage

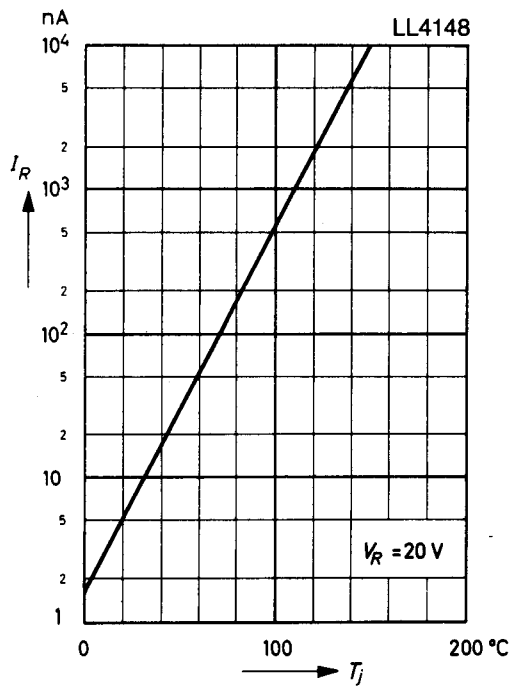


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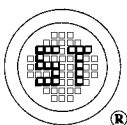
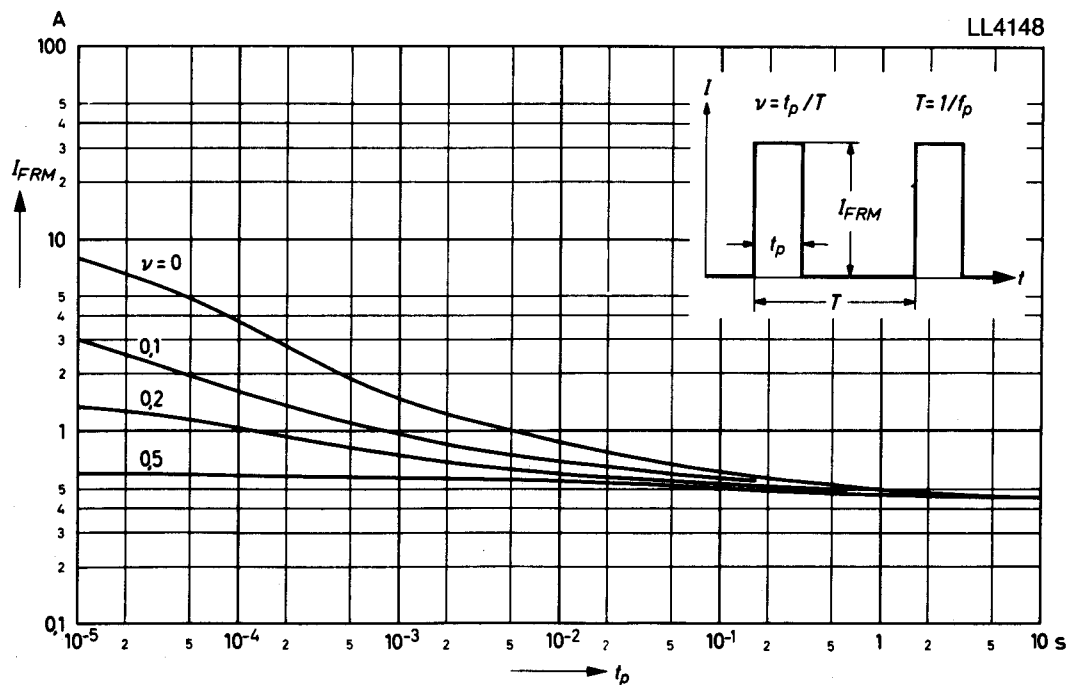


**Leakage current
versus junction temperature**



Admissible repetitive peak forward current versus pulse duration

Valid provided that electrodes are kept at ambient temperature



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